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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,607	12/28/2000	Ammar T. Degani	D/ A0652Q XER 2 0409	6752

7590 05/20/2005

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EXAMINER

LEE, TOMMY D

ART UNIT PAPER NUMBER

2624

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/750,607

Applicant(s)

DEGANI ET AL.

Examiner

Thomas D. Lee

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,8,9,11,13,17 and 18 is/are rejected.
- 7) ☒ Claim(s) 3,5,7,10,12 and 14-16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1: This Office action is responsive to applicant's amendment filed November 10, 2004. Claims 1-18 are pending.

#### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 4, 8, 9, 11, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,081,595 (Moreno et al.) in view of Japanese Publication 05-261962 (Takao).

Regarding claim 1, Moreno et al. disclose a method to enable printing of image data associated with a job having a plurality of pages, comprising the steps of: assigning a first media type to a first group of pages in the job; and assigning a second media type to a second group of pages in the job (read Abstract; column 8, lines 8-43).

Moreno et al. do not disclose a method for applying individualized tone-reproduction curves on a single page basis, comprising the steps of providing a plurality of calibrated tone-reproduction curves, each calibrated tone-reproduction curve corresponding to a distinct media type; receiving a page of image data to be printed; selecting a calibrated tone-reproduction curve for the received page of image data based on the assigned media type; and applying the selected calibrated tone-reproduction curve to print the page of image data. All of these limitations are disclosed by Takao (proper one of a plurality of gamma conversion functions selected based on whether a sublimating ink sheet or a melting ink sheet is discriminated, output as

printing data; read CONSTITUTION). One of ordinary skill in the art would have recognized in view of Takao that the plural media types used in Moreno et al. may have different characteristics, which would require selection of a gamma conversion function corresponding to a selected media type so that optimal image quality may be obtained on each of the media types used in the job. Therefore, it would have been obvious for one of ordinary skill in the art to modify the teaching of Moreno et al. by applying individualized tone-reproduction curves as disclosed by Takao.

Regarding claim 2, Moreno et al. disclose a xerographic printing device (printer includes laser 91, photoreceptor 98, charging station, developer 104, transfer station 106 and fuser 116 (column 3, line 67 – column 4, line 29), characteristic of a xerographic printer). In view of Takao, it would have been obvious for one of ordinary skill in the art to modify the xerographic printer by providing means for selecting a calibrated tone-reproduction curve corresponding to a selected media, as related above.

Regarding claim 4, Takao discloses generating a tone-reproduction curve for each media type; and storing the generated tone-reproduction curves; with each stored calibration tone-reproduction curve corresponding to a distinct media type (proper one of a plurality of gamma conversion functions selected based on whether a sublimating ink sheet or a melting ink sheet is discriminated, output as printing data; read CONSTITUTION, storage of gamma functions inherent for selection based on discriminated sheet). A step of performing a plurality of calibration operations, each calibration operation using a distinct media type, while not explicitly disclosed in Takao, would have been an obvious modification for one of ordinary skill in the art, since

calibration operations are inherently necessary in order to determine gamma correction functions based on discriminated media types.

Claims 8, 9 and 11 are system claims corresponding to above-rejected method claims 1, 2 and 4, respectively. Elements for performing the steps of the method claims are provided in the combined teaching of Moreno et al. and Takao, as set forth above.

Claim 17 recites the method steps of claims 1 and 4, all of which are either disclosed or suggested by the combined teaching of Moreno et al. and Takao (note rejections of claims 1 and 4 above), and thus claim 17 is rejected. Claim 18, which recites the method step of above-rejected claim 2, is rejected as well.

4. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moreno et al. in view of Takao as applied to claims 1 and 8, respectively, above, and further in view of U.S. Patent 5,206,686 (Fukui et al.).

Claim 6 recites the method steps of claims 1 and 4, and further recites the steps of comparing the plurality of tone-reproduction curves to group tone-reproduction curves having similar characteristics; selecting a single tone-reproduction curve from a group of tone-reproduction curves having similar characteristics; selecting a single tone-reproduction curve from a group of tone-reproduction curves having similar characteristics, each single tone-reproduction curve being the tone-reproduction curve associated with the media types that generated the tone-reproduction curve having similar characteristics; and storing selected and non-grouped tone-reproduction curves. While not disclosed in either Moreno et al. or Takao, Fukui et al. disclose a method whereby gradation (gamma) characteristics that are similar may be classified using a

suitable parameter for similar gradation characteristics, so that the number of gamma tables may be decreased (column 22, lines 16-24). While the gamma tables are not disclosed as being linked with media types, it would have been obvious to one of ordinary skill in the art that the method disclosed in Fukui et al. would be beneficial in the method disclosed by Moreno et al. in view of Takao, for if certain media types are found to have similar characteristics, a single gamma table may be used to represent the similar media types, thereby reducing the number of gamma tables which need to be stored. Therefore, it would have been obvious for one of ordinary skill in the art to modify the combined teaching of Moreno et al. and Takao by providing a means for classifying similar gradation characteristics as disclosed in Fukui et al.

Claim 13 is a system claim corresponding to above-rejected method claim 6. Elements for performing the steps of the method claim are provided in the combined teaching of Moreno et al., Takao and Fukui et al., as set forth above.

***Allowable Subject Matter***

5. Claims 3, 5, 7, 10, 12 and 14-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: No prior art has been found to disclose or suggest providing a plurality of calibrated tone-reproduction curves, each tone-reproduction curve corresponding to a distinct halftone type and media type combination, as recited in each of the above claims.

***Response to Arguments***

7. Applicant's arguments filed in response to the prior rejection of the claims under 35 U.S.C. 103(a) as set forth in the Office action of August 6, 2004 have been fully considered but they are not persuasive.

Applicant asserts that there is no motivation suggested in the prior art to combine the teachings of Moreno et al., Takao and/or Fukui. According to applicant, one of ordinary skill in the art would not look to Moreno et al. to solve the problems with which Takao is concerned, since the two cited references are aimed at solving totally disparate problems (see page 13, line 29 – page 14, line 9 of applicant's amendment).

The third paragraph of MPEP 2143.01 states, "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly *or implicitly* in the references themselves *or in the knowledge generally available to one of ordinary skill in the art.*" (emphasis added). Accordingly, motivation to combine need not be explicit in the prior art, so long as such motivation would have been ascertained by one of ordinary skill in the art, given the references. Even if Moreno et al. and Takao aim to solve disparate problems, one of ordinary skill would have been motivated to combine the two teachings. Moreno et al. disclose the use of different paper types during a print job. Takao disclose that different paper types have different tone characteristics, and that a proper tone characteristic conversion function is chosen in correspondence to the paper type to be used for printing, to enhance the quality of the print. One of ordinary skill in the art, given these two

references, would have reasoned that when a different paper type is used in Moreno et al., the tone characteristic conversion function corresponding to the paper type should be determined so that the quality of the print is not compromised because of the paper used.

Applicant asserts that even if the reference may be properly combined, the claims are patently distinguished over their teachings. Applicant specifically states that Takao does not disclose *calibration* of gamma correction functions *for a specific media type* (see page 14, lines 10-28 of applicant's amendment). Such calibration, as related above in the rejection of claim 4, would have been obvious to one of ordinary skill in the art. Calibration operations are inherently necessary in order to determine gamma correction functions based on discriminated media types. As would be clear to one of ordinary skill, optimum-quality prints for each paper type could not be realized if such calibration operations were not use.

Applicant asserts that claims 8 and 17, and all other claims depending from one of claims 1, 8 or 17, are patentable for the same reasons as discussed with respect to claim 1 (see page 14, line 29 – page 15, line 2 of applicant's amendment). However, claim 1 is not patentable for the reasons mentioned above, and thus claims 8 and 17, and corresponding dependent claims, are not patentable, either.

### ***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).



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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (571) 272-7436. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas D. Lee  
Primary Examiner  
Art Unit 2624

tdl  
May 18, 2005